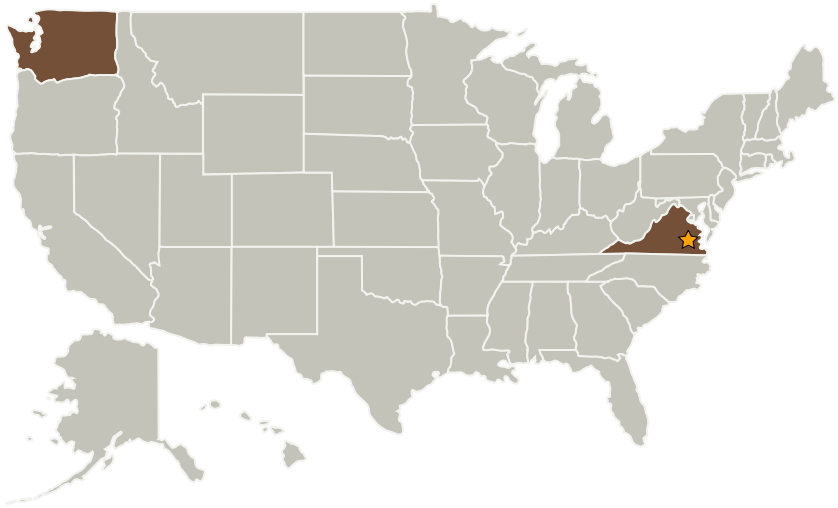
A Reliable Electronic Package for Space Exploration, Phase II

Completed Technology Project (2009 - 2011)

Project Introduction

The proposed program will develop an hermetic, CTE matched, thermal shock resistant ceramic packaging technology that will facilitate the operation of Si and SiGe devices at extreme temperatures (-230ºC to 130ºC) encountered on the Moon and Mars. Processes that were developed in Phase I to assemble the components into a hermetically sealed package will be used to package SiGe operational amplifiers. Process and materials reliability will be demonstrated by fabricating and testing a 12 or 28 pin single chip module packages.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Langley Research Center(LaRC)	Lead Organization	NASA Center	Hampton, Virginia
Sienna Technologies, Inc.	Supporting Organization	Industry	Woodinville, Washington

Primary U.S. Work Locations	
Virginia	Washington

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Langley Research Center (LaRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Transitions

November 2009: Project Start

May 2011: Closed out

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX02 Flight Computing and Avionics
  - TX02.1 Avionics Component Technologies
    - TX02.1.2 Electronic Packaging and Implementations